

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEBRASKA

BOARD OF REGENTS OF THE )  
UNIVERSITY OF NEBRASKA, and )  
UNEMED CORPORATION, )

4:09CV3075

Plaintiffs, )

v. )

**MEMORANDUM AND ORDER**

SIEMENS HEALTHCARE )  
DIAGNOSTICS, INC., )

Defendant. )

This is a patent infringement case in which the Board of Regents of the University of Nebraska and UNeMed, an affiliate of the University (“University”), allege that Siemens Healthcare Diagnostics, Inc. (“Siemens”), has marketed and sold a device and system for testing medical samples that infringes upon two of the University’s patents. Siemens moves for a partial summary judgment of non-infringement of the ‘670 patent<sup>1</sup> on the basis that its product, the “StreamLAB,” does not infringe, either literally or under the doctrine of equivalents. (Filing [67](#).)

**I. UNDISPUTED MATERIAL FACTS**

1. Plaintiff Board of Regents of the University of Nebraska (“the University”) is a public corporate body organized and existing under the constitution

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<sup>1</sup>The “‘670 patent” refers to U.S. Patent No. 5,985,670, which is entitled “Method for Automatic Testing of Laboratory Specimens” and which lists plaintiff Board of Regents of the University of Nebraska as the “assignee.” (Filing [69](#)-2 at CM/ECF p. 2.)

and laws of Nebraska with its principal place of business in Lincoln, Nebraska. (Filing [1](#), Complaint ¶ 1.) Plaintiff UNeMed Corporation is a corporation organized under the laws of Nebraska with its principal place of business in Omaha, Nebraska. UNeMed is an affiliate of the University. (*Id.* ¶ 2.)

2. Siemens Healthcare Diagnostics, Inc., is a California corporation with its principal place of business in Deerfield, Illinois. (Filing [55](#), Amended Answer ¶ 3.)

3. This is a patent infringement case arising under [35 U.S.C. §§ 1](#) et seq., and the parties agree that jurisdiction is appropriate under [28 U.S.C. §§ 1331](#) and [1338\(a\)](#). (*Id.* ¶ 5.) The parties also agree that venue is appropriate in this judicial district under [28 U.S.C. §§ 1391](#) and [1400](#) and that Siemens is subject to personal jurisdiction in this district. (*Id.* ¶ 6.)

4. The abstract of the ‘670 patent describes the patented “method for automatic testing of laboratory specimens” as follows:

A method for automatic testing of a laboratory specimen includes the initial step of obtaining a specimen to be tested and placing the specimen in a specimen container. The container is removably mounted in an independent carrier designed to carry an individual specimen through a laboratory to one or more of a plurality of work stations, where a predetermined test will be performed on the specimen. Once the test has been performed, the carrier is moved to another work station based on the result of the first test and then to an archiving station for storage of the specimen.

(Filing [69](#)-2 at CM/ECF p. 2.)

5. The specification of the ‘670 patent states: “At specimen receiving station **22**, the carrier **26** is given an identification code which correlates with the

specimen container, so that the container and carriage may be directed throughout the laboratory automation system . . . .” (Filing [69](#)-2, ‘670 Patent at 3:47-51.)

6. The original claims of the ‘670 patent required “marking each of the specimen container and carrier with an identification code.” (Filing [69](#)-3 at SHD001354.) After the patent examiner’s rejection over prior art during prosecution of the ‘670 patent, the patent applicant added new claims to its patent application that required the carrier to be marked with the “same machine readable code as said first container.” (Filing [69](#)-3 at SHD001353-54 (Petition), SHD001435 (First Rejection at 4), SHD001448, SHD001450, SHD001454 (First Amendment at 1-4, 6, 9).) The final version of claim 1 of the ‘670 patent states, in part: “A method of automatically testing and tracking a specimen in a laboratory, comprising the steps of . . . marking the first container with a machine readable code; marking a first carrier for transporting the first container with the same machine readable code as said first container . . . .” (Filing [69](#)-2, ‘670 Patent at 5:39-47.)

7. Each claim of the ‘670 patent requires the step of marking the “first carrier for transporting the first container with the same machine readable code as said first container.” (Filing [69](#)-2 at CM/ECF p. 6.) In a *Markman* opinion issued on September 16, 2010, I concluded that:

a person of skill in the art would interpret the “same . . . code” in claim 1 of the ‘670 patent to mean that the *type* of code used on the “first container” and “first carrier” must be the same—that is, indistinguishable. For example, the container and carrier must both be marked with bar codes, or they must both be marked with RFID tags, or they must both be marked with some other type of indistinguishable “code.” The word “same,” as used in the disputed claim 1 language, does *not* mean correlated.

(Filing [98](#) at CM/ECF p. 20.)

8. In the accused StreamLAB system, each test tube is marked with a bar code label that is unique at a given point in time and generated specifically for the specimen contained in the test tube. (Filing [69](#)-5, Plaintiffs' PICs<sup>2</sup> at CM/ECF p. 7.) In contrast, the puck (or carrier) is embedded with a radio frequency identification (RFID) chip that transmits an identification number that is physically different than the bar code on any test tube that the puck is holding. (Filing [69](#)-5, Plaintiffs' PICs at CM/ECF p. 7; Filing [69](#)-8, Miller Decl. ¶¶ 6, 8).

## II. SIEMENS' MOTION FOR PARTIAL SUMMARY JUDGMENT

Siemens moves (filing [67](#)) for a partial summary judgment of non-infringement of the '670 patent. Siemens argues that its product, the StreamLAB, does not infringe literally or under the doctrine of equivalents because the StreamLAB system does not mark the first carrier "with the same machine readable code as said first container," a step which is incorporated into each claim of the '670 patent.

### A. *Literal Infringement*

As noted above, I have previously decided that "the same machine readable code as said first container" in the '670 patent means "the same *type* of machine readable code as said first container." (Filing [98](#) at CM/ECF p. 21 (emphasis added).) It is undisputed that the StreamLAB system uses different types of codes on its containers and carriers—that is, Stream LAB's test tubes (or containers) are marked with bar codes, whereas its pucks (or carriers) are internally embedded with RFID chips, whose codes are sensed using radio frequency. As it must, the University concedes that if this court's *Markman* construction of "same" as used in the phrase "same machine readable code as said first container" in the '670 patent is applied, "then StreamLAB does not literally infringe the '670 patent." (Filing [100](#) at CM/ECF

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<sup>2</sup>"PICs" refer to Preliminary Infringement Contentions.

p. 3.) Therefore, Siemens’ motion for partial summary judgment as to literal infringement of the ‘670 patent will be granted.

### ***B. Doctrine of Equivalents***

The University contends that even if the Siemens StreamLAB does not literally infringe the ‘670 patent, Siemens “still *does* infringe the ‘670 patent under the doctrine of equivalents.” (Filing [100](#) at CM/ECF p. 3 (emphasis in original).) “Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” [Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 \(1997\)](#)

The University asserts that while the StreamLAB uses distinguishable types of codes (RFID tags and bar codes), both codes are machine-readable; both codes are read by sensors external to the carrier or container; and both codes are “associated” or “correlated” in a computer lookup table—that is, they are “treated as one and the same (and thus equivalents) by the laboratory automation system.” (Filing [100](#) at CM/ECF pp. 3, 13.) Therefore, concludes the University, “StreamLAB’s ‘association’ of a machine readable RFID tag identifying its carrier with a bar code on a specimen container in order to track the container is equivalent to the [third claim] element<sup>3</sup> in question, and StreamLAB therefore infringes the ‘670 patent.” (Filing [100](#) at CM/ECF p. 6.)

If too broadly applied, the doctrine of equivalents conflicts “with the

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<sup>3</sup>The third element of claim 1 of the ‘670 patent is: “marking a first carrier for transporting the first container with the same machine readable code as said first container, and placing the container thereon . . . .” (Filing [69-2](#) at CM/ECF p. 6.)

definitional and public-notice functions of the statutory claiming requirement.” Warner-Jenkinson Co., Inc., 520 U.S. at 29. “In recognition of this risk, and in an effort to strike the proper balance between protecting patentees while also providing sufficient notice to the public, various rules of law have emerged to constrain when and how the doctrine of equivalents is to be applied.” Freedman Seating Co. v. American Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005).

Two primary legal doctrines that preclude application of the doctrine of equivalents are (1) the “all elements rule,” which includes the “claim vitiation doctrine” and the “specific exclusion principle” and (2) prosecution history estoppel. Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d 1308, 1318 (Fed. Cir. 2003).

### ***1. All Elements Rule***

#### ***a. Claim Vitiation Doctrine***

Under the all elements rule, there can be no infringement under the doctrine of equivalents if even one limitation of a claim or its equivalent is not present in the accused device. Such a determination must be premised upon a proper claim construction. Thus, if a court determines that a finding of infringement under the doctrine of equivalents would entirely vitiate a particular claimed element, then the court should rule that there is no infringement under the doctrine of equivalents.

Lockheed Martin Corp., 324 F.3d at 1321 (internal citations & quotation marks omitted). See also Warner-Jenkinson Co., 520 U.S. at 29 (“It is important to ensure that the application of the doctrine [of equivalents], even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.”); Freedman Seating Co., 420 F.3d at 1358 (“an element of an accused product or process is not, as a matter of law, equivalent to a limitation of the claimed

invention if such a finding would entirely vitiate the limitation”).

There is no set formula for determining whether a finding of equivalence would vitiate a claim limitation, and thereby violate the all limitations rule. Rather, courts must consider the totality of the circumstances of each case and determine whether the alleged equivalent can be fairly characterized as an insubstantial change from the claimed subject matter without rendering the pertinent limitation meaningless.

Id. at 1359. “Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment.” Warner-Jenkinson Co., Inc., 520 U.S. at 38 n.8.

In this case, the claim vitiation doctrine prevents application of the doctrine of equivalents because the University’s assertion that using *different* types of codes on the container and carrier is equivalent to using the *same* type of code on both objects because the codes are eventually “correlated” in the laboratory testing process effectively reads the “same . . . code” limitation out of the ‘670 patent. SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 1346 (Fed. Cir. 2001) (using example that “if a patent states that the claimed device must be ‘non-metallic,’ the patentee cannot assert the patent against a metallic device on the ground that a metallic device is equivalent to a non-metallic device”). Indeed, I already concluded in the *Markman* opinion that replacing “same” with “correlated” in claim 1 would have improperly read out of the claim the word “same.” (Filing 98 at CM/ECF p. 20.)<sup>4</sup> Allowing *different* types of codes to be equivalent to the *same*

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<sup>4</sup>In the *Markman* opinion, I specifically found that the word “same,” as used in the disputed claim 1 language, does not mean “correlated,” and the word “same” cannot be read out of claim 1 simply because the patent specification discloses “correlating” the codes on the carrier and container to track and direct specimens. (Filing 98 at CM/ECF p. 20.)

type of code would improperly render meaningless the “same . . . code” limitation. (Filing [98](#) at CM/ECF p. 20.)

Under the University’s theory, virtually any process in which machine-readable codes are used—even if the codes are of dramatically different types—would infringe the “same . . . code” limitation. Claim vitiation precludes this result. See [Freedman Seating Co., 420 F.3d at 1361-62](#) (reversing finding of infringement where claim included “slidably” mounted limitation and accused product’s support member was “rotatably” mounted; “the district court’s finding of infringement under the doctrine of equivalents had the effect of entirely vitiating the ‘slidably mounted’ limitation”); [Asyst Techs., Inc. v. Emtrak, Inc., 402 F.3d 1188, 1195 \(Fed. Cir. 2005\)](#) (claim vitiation principle barred application of doctrine of equivalents because “[t]o hold that ‘unmounted’ is equivalent to ‘mounted’ would effectively read the ‘mounted on’ limitation out of the patent”); [Moore U.S.A., Inc. v. Standard Register Co., 229 F.3d 1091, 1106 \(Fed. Cir. 2000\)](#) (“[T]o allow what is undisputedly a minority (i.e., 47.8%) to be equivalent to a majority would vitiate the requirement that the ‘first and second longitudinal strips of adhesive . . . extend the majority of the lengths of said longitudinal marginal portions.’”); [Tronzo v. Biomet, Inc., 156 F.3d 1154, 1160 \(Fed. Cir. 1998\)](#) (finding all shapes to be equivalent structure would entirely vitiate limitation in patent requiring a “generally conical shape”).

### ***b. Specific Exclusion Principle***

The corollary to the doctrine of claim vitiation is the “specific exclusion principle,” which bars the patentee from asserting as an equivalent subject matter that has been implicitly or explicitly excluded by a claim limitation. [Asyst Techs., 402 F.3d at 1195](#); [SciMed, 242 F.3d at 1347](#)). This court may not overlook distinct limitations in a patent or “expand the doctrine of equivalents beyond its purpose to allow recapture of subject matter excluded by a deliberate and foreseeable claim drafting decision.” [Planet Bingo, LLC v. Game Tech Intern., Inc., 472 F.3d 1338,](#)

1344 (Fed. Cir. 2006).

It can fairly be said that the “same . . . code” limitation in the ‘670 patent, by definition, excludes “different” types of codes. This is especially so in light of my previous finding that the codes must be “indistinguishable”—specifically, “the container and carrier must both be marked with bar codes, or they must both be marked with RFID tags, or they must both be marked with some other type of indistinguishable ‘code’.” (Filing [98](#) at CM/ECF p. 20.)

The alleged equivalent here—different types of codes—is the antithesis of the claimed limitation requiring the *same* type of code. Bar codes are visual and read optically. RFID codes are detected using radio frequency. The two types of codes involved in this case are fundamentally different, and their use cannot reasonably be deemed the equivalent of using the same, “indistinguishable” type of code on both the container and carrier. Indeed, if “same . . . code” could be equivalent to a “different code,” there would have been no reason for the “same” limitation in the ‘670 patent in the first place. See [Planet Bingo, LLC, 472 F.3d at 1345](#) (no infringement under doctrine of equivalents when accused device did not determine winning bingo combination until *after* game began, whereas in patented game method, winning combination was known *before* game began; “In this case, the proposed application of the doctrine of equivalents would change “before” to “after” . . . . This court has refused to apply the doctrine in other cases where the accused device contained the antithesis of the claimed structure.”); [Asyst Techs., 402 F.3d at 1195](#) (specific exclusion principle barred application of doctrine of equivalents because “the term ‘mounted’ can fairly be said to specifically exclude objects that are ‘unmounted’”); [Moore U.S.A., Inc., 229 F.3d at 1106](#) (“[I]t would defy logic to conclude that a minority—the very antithesis of a majority—could be insubstantially different from a claim limitation requiring a majority, and no reasonable juror could find otherwise”); [Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc., 206 F.3d 1408, 1416 \(Fed. Cir. 2000\)](#) (“[N]o reasonable jury could find that a stop which extends to the

peripheral edge of a disk is equivalent to one that is ‘substantially inward’ of the very same disk.”); [\*Sage Prods., Inc. v. Devon Indus., Inc.\*, 126 F.3d 1420, 1425-26 \(Fed. Cir. 1997\)](#) (elongated slot contained *within* body of container used for safe disposal of sharp medical instruments, rather than *on top of*, claimed container did not infringe under doctrine of equivalents; “Sage left the PTO with manifestly limited claims that it now seeks to expand through the doctrine of equivalents. However, as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure.”).

### ***c. Conclusion Regarding All Elements Rule***

As explained by way of example in [\*SciMed\*, 242 F.3d at 1336](#), and as supported by the above-cited cases, the University is barred from using the doctrine of equivalents to show that the Siemens StreamLAB infringes its ‘670 patent, whether the legal basis for that bar is characterized as “claim vitiation” or “specific exclusion”:

[I]f a patent states that the claimed device must be “non-metallic,” the patentee cannot assert the patent against a metallic device on the ground that a metallic device is equivalent to a non-metallic device. The unavailability of the doctrine of equivalents could be explained either as the product of an impermissible vitiation of the “non-metallic” claim limitation, or as the product of a clear and binding statement to the public that metallic structures are excluded from the protection of the patent.

## ***2. Prosecution History Estoppel***

Because I have found that the University’s assertion of infringement under the doctrine of equivalents is barred by the claim vitiation doctrine and the specific exclusion principle, it is unnecessary to address Siemens’ argument that application

of the doctrine of equivalents is barred as a matter of law by prosecution history estoppel. Lockheed Martin Corp., 324 F.3d at 1321 (because a finding of infringement under the doctrine of equivalents would entirely vitiate a claim limitation in the patent at issue, the claim of infringement must fail and the court “need not discuss the legal doctrine of prosecution history estoppel”).

Further, I need not address the merits of the traditional doctrine of equivalents infringement tests because the legal bars discussed above are dispositive. Pioneer Magnetics, Inc. v. Micro Linear Corp., 330 F.3d 1352, 1357 (Fed. Cir. 2003) (because court’s determination that prosecution history estoppel barred application of doctrine of equivalents was “dispositive,” it was “unnecessary to reach the remainder of the issues briefed by the parties”).

Accordingly,

IT IS ORDERED:

1. Siemens’ motion (filing [67](#)) for partial summary judgment as to literal infringement of the ‘670 patent is granted;
2. Siemens’ motion (filing [67](#)) for partial summary judgment as to infringement of the ‘670 patent under the doctrine of equivalents is granted;
3. Siemens’ objections to and motion to strike the Declaration of Dr. Markin (filing [81](#)) are denied as moot for the reason that the court did not rely on such testimony in reaching its decision on Siemens’ motion for partial summary judgment.

DATED this 15th day of December, 2010.

BY THE COURT:

*Richard G. Kopf*

United States District Judge

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